



Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

NPDES Permit No. NM0028479

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et. seq; the "Act"),

Jemez Valley Public Schools
8501 Highway 4
Jemez Pueblo, NM 87024

is authorized to discharge from the Jemez Valley Public Schools Wastewater Treatment Plant located at 8501 Highway 4, Jemez Pueblo, Sandoval County, New Mexico,

to the Jemez River thence the Rio Grande in Segment 20.6.4.107 of the Rio Grande Basin, from a point located approximately

Outfall 001: Latitude 35° 39' 24" North, Longitude 106° 44' 19" West

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II, III, and IV hereof.

This permit shall become effective on

This permit and the authorization to discharge shall expire at midnight,

Issued on

Prepared by

Miguel I. Flores
Director
Water Quality Protection Division (6WQ)

Isaac Chen
Environmental Engineer
Permits Section (6WQ-PP)

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PART I

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS.

1. Final Effluent limits - 0.030 MGD design flow

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from outfall serial number 001. Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>				<u>Monitoring Requirements</u>	
	Mass (lbs/day, unless otherwise specified)		Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	30-Day Avg.	7-Day Avg.	30-Day Avg.	7-Day Avg.		
Flow ⁽¹⁾ STORET: 50050	N/A	N/A	N/A	N/A	Daily	Instantaneous
Biochemical Oxygen Demand (BOD ₅) STORET:00310	2.5	3.8	30	45	One/Quarter	Grab
Total Suspended Solids (TSS) STORET: 00530	2.5	3.8	30	45	One/Quarter	Grab
Total Residual Chlorine ⁽²⁾ (TRC) STORET: 50060	N/A	N/A	0.19 ⁽²⁾		One/Month	Grab
Fecal Coliform Bacteria ⁽³⁾ STORET: 74055	N/A	N/A	500 ⁽³⁾	500 ⁽³⁾ (Daily Max)	One/Quarter	Grab
E. coli ⁽⁴⁾ STORET: 51040	N/A	N/A	Report ⁽⁴⁾	Report ⁽⁴⁾ (Daily Max)	Once/Quarter	Grab
E. coli ⁽⁵⁾ STORET: 51040	N/A	N/A	126 ⁽⁵⁾	410 ⁽⁵⁾ (Daily Max)	Once/Quarter	Grab
pH ⁽⁶⁾ STORET: 00400	N/A	N/A	6.6 s.u. Minimum	8.8 s.u. Maximum	One/Quarter	Grab

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING		MONITORING REQUIREMENTS	
WHOLE EFFLUENT TOXICITY TESTING (48-Hr. Static Non-Renewal) ⁽⁷⁾	30-DAY AVG	48-HR MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
Daphnia pulex	Report	Report	Once/Term ⁽⁸⁾	Grab
Pimephales promelas	Report	Report	Once/Term ⁽⁸⁾	Grab

FOOTNOTES:

- 1 Report monthly average and daily maximum as million gallons per day (MGD) by instantaneous measurement.
- 2 Instantaneous Maximum. After dechlorination and prior to final disposal, the effluent shall contain NO MEASURABLE total residual chlorine (TRC) at any time. NO MEASURABLE will be defined as no detectable concentration of TRC as determined by any approved method established in 40 CFR 136. If during the term of this permit the minimum quantification level for TRC becomes less than 19 ug/l, then 19 ug/l shall become the effluent limitation. The effluent limitation for TRC is the instantaneous maximum and can not be averaged for reporting purposes.

- 3 Colonies/100 ml. Monitoring requirement of fecal coliform may be eliminated when the standard for E. coli is approved.
4. Beginning from the date of effective of the permit and lasting through the date of six months from the effective of the permit, E. coli shall be monitored and reported.
- 5 Beginning from the date of six months from the effective of the permit and lasting through the expiration of the permit, limitations of E. coli shall be met. The permittee shall use only the State of New Mexico approved analytical methods as required by 20.6.4.14 NMAC, revised State of New Mexico Water Quality Standards as amended through February 16, 2006. The latest edition of Standard Methods, 20th Edition, contains methods for E. coli bacteria analysis 9221-E and 9221-F that are consistent with the State of New Mexico approved analytical methods for wastewater. The permittee may use these methods for E. coli analysis for wastewater until the time EPA approves the proposed 40 CFR 136 methods (Colilert, Colilert-18, m-ColiBlue 24, membrane filter method). At that time, all the aforementioned methods will be acceptable.
6. Standard unit.
7. See Part II.D., Whole Effluent Toxicity Testing Requirements for additional WET monitoring and reporting conditions.
8. Once per permit-term. The test shall occur in winter or springtime during the first year of the permit term. This permit does not establish requirements to automatically increase the WET testing frequency after a test failure, or to begin a toxicity reduction evaluation (TRE) in the event of multiple test failures. However, upon failure of any WET test, the permittee must report the test results to EPA and NMED, Surface Water Quality Bureau, in writing, within 5 business days of notification the test failure. EPA and NMED will review the test results and determine the appropriate action necessary, if any.

There shall be no discharge of oils, scum, grease and other floating materials that would cause the formation of a visible sheen or visible deposits on the bottom or shoreline, or would damage or impair the normal growth, function or reproduction of human, animal, plant or aquatic life.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the discharge from the final treatment unit prior to the discharge into the receiving stream from the following approximate location:

Outfall 001: Latitude: 35° 39' 24" North, Longitude: 106° 44' 19" West

SECTION B. SCHEDULE OF COMPLIANCE

The permittee shall achieve compliance with the E. coli effluent limitations specified for discharges in accordance with the following schedule:

<u>ACTIVITY</u>	<u>DATE OF COMPLETION</u>
Achieve Final Effluent Limitations	6-months after permit effective date

SECTION C. MONITORING AND REPORTING.**1. Monitoring and Reporting**

- a. The permittee shall effectively monitor the operation and efficiency of all treatment and control facilities and the quantity and quality of the treated discharge.
- b. Monitoring information shall be on Discharge Monitoring Report Form(s) EPA 3320-1 as specified in Part III.D.4 of this permit and shall be submitted quarterly. Each quarterly submittal shall include separate forms for each month of the reporting period.
- c. Reporting periods shall end on the last day of the months March, June, September, and December.
- d. The permittee is required to submit regular quarterly reports as described above postmarked no later than the 28th day of the month following each reporting period.
- e. **NO DISCHARGE REPORTING**

If there is no discharge at Outfall 001 during the sampling month, place an "X" in the NO DISCHARGE box located in the upper right corner of the Discharge Monitoring Report.

2. If any 7-day average or 30-day average value exceeds the effluent limitations specified in Part I.A, the permittee shall report the excursion in accordance with the requirements of Part III.D.
3. Any 7-day average or 30-day average value reported in the required Discharge Monitoring Report which is in excess of the effluent limitation specified in Part I.A shall constitute evidence of violation of such effluent limitation and of this permit.
4. Other measurements of oxygen demand (e.g., TOC and COD) may be substituted for the five-day Biochemical Oxygen Demand (BOD₅), or for the five-day Carbonaceous Biochemical Oxygen Demand (CBOD₅), as applicable, where the permittee can demonstrate long-term correlation of the method with BOD₅ or CBOD₅ values, as

applicable. Details of the correlation procedures used must be submitted and prior approval granted by the permitting authority for this procedure to be acceptable. Data reported must also include evidence to show that the proper correlation continues to exist after approval.

5. Overflow Reporting:

The permittee shall report all overflows with the Discharge Monitoring Report submittal. These reports shall be summarized and reported in a tabular format. The summaries shall include: the date, time, duration, location, estimated volume, and cause of the overflow; observed environmental impacts from the overflow; action taken to address the overflow; and ultimate discharge location if not contained (e.g., storm sewer system, ditch, tributary).

Overflows which endanger health or the environment shall be orally reported to EPA at (214) 665-6595, and to the NMED Surface Water Quality Bureau at (505) 827-0187 within 24 hours from the time the permittee becomes aware of the circumstance. A written report of overflows which endanger health or the environment shall be provided within five (5) days of the time the permittee becomes aware of the circumstance. The written reports shall be sent to both EPA, and the NMED Surface Water Quality Bureau.

7. Copy of Reports and Application to NMED

The permittee shall send a copy of discharge monitoring reports (DMRs), all other reports required in the permit, as well as a copy of application for permit renewal to New Mexico Environment Department at the mailing address listed in Part III of the permit.

PART II - OTHER CONDITIONS

A. PERMIT REOPENER CLAUSE

1. In accordance with 40 CFR 122.62, the permit may be reopened and modified during the life of the permit if relevant portions of State of New Mexico Water Quality Standards and/or State Water Quality Management Plans are revised, new water quality standards are established and/or remanded and any other policy, or if procedures and implementation guidelines are adopted by the State that change applicable water quality standards and permit implementation.
2. In accordance with 40 CFR Part 122.62, the permit may be reopened and modified if new information is received that was not available at the time of permit issuance that would have justified the application of different permit conditions at the time of permit issuance.
3. If a TMDL is established for the Jemez River, the permit may be reopened, and new limitations based on the TMDL may be incorporated into the permit.

B. CONTRIBUTING INDUSTRIES

1. The following pollutants may not be introduced into the treatment facility:
 - a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;
 - b. Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, unless the works are specifically designed to accommodate such discharges;
 - c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference;
 - d. Any pollutant, including oxygen demanding pollutants (e.g., BOD), released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW;
 - e. Heat in amounts which will inhibit biological activity in the POTW resulting in Interference but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40 degrees Centigrade (104 degrees Fahrenheit) unless the Approval Authority, upon request of the POTW, approves alternate temperature limits;
 - f. Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
 - g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and
 - h. Any trucked or hauled pollutants, except at discharge points designated by the POTW.

C. POLLUTION PREVENTION REQUIREMENTS

The permittee shall continue a program directed towards optimizing the efficiency and extending the useful life of the facility. The permittee shall consider the following items in the program:

- a. The influent loadings, flow and design capacity;
- b. The effluent quality and plant performance;
- c. The age and expected life of the wastewater treatment facility's equipment;
- d. Bypasses and overflows of the tributary sewerage system and treatment works;
- e. New developments at the facility;
- f. Operator certification and training plans and status;
- g. The financial status of the facility;
- h. Preventative maintenance programs and equipment conditions and;
- i. An overall evaluation of conditions at the facility.

D. WHOLE EFFLUENT TOXICITY TESTING (48-HOUR ACUTE NOEC FRESHWATER)

It is unlawful and a violation of this permit for a permittee or his designated agent, to manipulate test samples in any manner, to delay sample shipment, or to terminate or to cause to terminate a toxicity test. Once initiated, all toxicity tests must be completed unless specific authority has been granted by EPA Region 6 or the State NPDES permitting authority.

1. SCOPE AND METHODOLOGY

- a. The permittee shall test the effluent for toxicity in accordance with the provisions in this section.

APPLICABLE TO FINAL OUTFALL(S): 001

REPORTED ON DMR AS FINAL OUTFALL: 001

EFFLUENT CONCENTRATIONS (%): 1%, 2%, 5%, 7%, 10%

CRITICAL DILUTION (%): 5%

EFFLUENT DILUTION SERIES: 50

SAMPLE TYPE: Grab

TEST SPECIES/METHODS: 40 CFR Part 136

Daphnia pulex acute static renewal 48 hour definitive toxicity test using EPA-821-R-02-012, or the latest update thereof. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test.

Pimephales promelas (Fathead minnow) acute static renewal 48-hour definitive toxicity test using EPA-821-R-02-012, or the latest update thereof. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test.

b. The NOEC (No Observed Lethal Effect Concentration) is defined as the greatest effluent dilution at and below which lethality that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. Acute test failure is defined as a demonstration of a statistically significant lethal effect at test completion to a test species at or below the critical dilution.

c. This permit may be reopened to require whole effluent toxicity limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

d. Test failure is defined as a demonstration of statistically significant lethal effects to a test species at or below the effluent critical dilution.

e. This permit does not establish requirements to automatically increase the WET testing frequency after a test failure, or to begin a toxicity reduction evaluation (TRE) in the event of multiple test failures. However, upon failure of any WET test, the permittee must report the test results to EPA and NMED, Surface Water Quality Bureau, in writing, within 5 business days of notification the test failure. EPA and NMED will review the test results and determine the appropriate action necessary, if any.

2. REQUIRED TOXICITY TESTING CONDITIONS

a. Test Acceptance

The permittee shall repeat a test, including the control and all effluent dilutions, if the procedures and quality assurance requirements defined in the test methods or in this permit are not satisfied, including the following additional criteria:

i. Each toxicity test control (0% effluent) must have a survival equal to or greater than 90%.

ii. The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for: *Daphnia pulex* survival test; and Fathead minnow survival test.

iii. The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal effects are exhibited for: *Daphnia pulex* survival test; and Fathead minnow survival test.

Test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%. A repeat test shall be conducted within the required reporting period of any test determined to be invalid.

b. Statistical Interpretation

For the *Daphnia pulex* survival test and the Fathead minnow survival test, the statistical analyses used to determine if there is a statistically significant difference between the control and the critical dilution shall be in accordance with the methods for determining the No Observed Effect Concentration (NOEC) as described in EPA-821-R-02-012 or the most recent update thereof.

If the conditions of Test Acceptability are met in Item 2.a above and the percent survival of the test organism is equal to or greater than 90% in the critical dilution concentration and all lower dilution concentrations, the test shall be considered to be a passing test, and the permittee shall report an NOEC of not less than the critical dilution for the DMR reporting requirements found in Item 4 below.

c. Dilution Water

i. Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The permittee shall substitute synthetic dilution water of similar pH, hardness, and alkalinity to the closest downstream perennial water for;

(A) toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and

(B) toxicity tests conducted on effluent discharges where no receiving water is available due to zero flow conditions.

ii. If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test control acceptance criteria of Item 2.a), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:

(A) a synthetic dilution water control which fulfills the test acceptance requirements of Item 3.a was run concurrently with the receiving water control;

(B) the test indicating receiving water toxicity has been carried out to completion (i.e., 48 hours);

(C) the permittee includes all test results indicating receiving water toxicity with the full report and information required by Item 4 below; and

(D) the synthetic dilution water shall have a pH, hardness, and alkalinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the discharge, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water.

d. Samples and Composites (**Grab Samples Are Authorized For This Permit**)

i. The permittee shall collect two grab samples from the outfall(s) listed at Item 1.a above.

ii. The permittee shall collect a second grab sample for use during the 24 hour renewal of each dilution concentration for both tests. The permittee must collect the grab samples so that the maximum holding time for any effluent sample shall not exceed 36 hours. The permittee must have initiated the toxicity test within 36 hours after the collection of the last portion of the first grab sample. Samples shall be chilled to 4 degrees Centigrade during collection, shipping, and/or storage.

iii. The permittee must collect the grab samples such that the effluent samples are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on an intermittent basis.

iv. If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions and the sample holding time are waived during that sampling period. However, the permittee must collect an effluent grab sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days. The effluent grab sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Item 3 of this section.

3. REPORTING

a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this Part in accordance with the Report Preparation Section of EPA-821-R-02-012, for every valid or invalid toxicity test initiated, whether carried to completion or not. The permittee shall retain each full report pursuant to the provisions of PART III.C.3 of this permit. The permittee shall submit full reports upon the specific request of the Agency. For any test which fails, is considered invalid or which is terminated early for any reason, the full report must be submitted for agency review.

b. A valid test for each species must be reported on the DMR during each reporting period specified in PART I of this permit unless the permittee is performing a TRE which may increase the frequency of testing and reporting. Only ONE set of biomonitoring data for each species is to be recorded on the DMR for each reporting period. The data submitted should reflect the LOWEST Survival results for each species during the reporting period. All invalid tests, repeat tests (for invalid tests), and retests (for tests previously failed) performed during the reporting period must be attached to the DMR for EPA review.

c. The permittee shall report the following results of each valid toxicity test on the subsequent monthly DMR for that reporting period in accordance with PART III.D.4 of this permit. Submit retest information clearly marked as such with the following month's DMR. Only results of valid tests are to be reported on the DMR.

i. *Daphnia pulex*

(A) If the NOEC for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TEM3D.

(B) Report the NOEC value for survival, Parameter No. TOM3D.

(C) Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQM3D.

ii. *Pimephales promelas* (Fathead minnow)

(A) If the No Observed Effect Concentration (NOEC) for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TEM6C.

(B) Report the NOEC value for survival, Parameter No. TOM6C.

(C) Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQM6C.

d. If retests are required either by EPA and/or NMED, enter the following codes on the DMR for retests only:

i. For retest number 1, Parameter 22415, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

ii. For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."